Fairfax County Stormwater Service District
November 2009

1. What is the Stormwater Service District?

As part of the FY 2010 Adopted Budget Plan, a new service district was created to support the stormwater management program, as authorized by Virginia Code Ann. Sections 15.2-2400. The service district levy is $0.010 (one cent) per $100 of assessed real estate value, an amount that supports both staff operating requirements and stormwater capital projects. Since FY 2006, the Board of Supervisors had dedicated the value of one penny of the real estate tax, or approximately $20 million annually to stormwater capital projects. In FY 2009, due to budget constraints, staff and operating costs were charged to the stormwater penny fund, resulting in less funding for capital project support. The Service District was created in FY 2010 to provide a dedicated funding source for both operating and capital project requirements.

2. What is stormwater management?

Stormwater management is the process of controlling runoff which is rain, melting snow and ice draining from roads, sidewalks, driveways, roofs and other hard surfaces. Once the runoff reaches natural areas with meadows or woodlands, some of it will soak into the ground or flow directly into streams. A large amount of runoff is collected into the storm drainage system. In Fairfax County, the storm drainage system is not part of the sanitary sewer system. The runoff flows into the storm drainage system through curb inlets, yard inlets, storm drains and grates. Storm pipe systems carry the runoff to stormwater detention or retention facilities or directly to streams. Ultimately, this runoff makes its way to the Potomac River and the Chesapeake Bay.

More information about stormwater management in Fairfax County can be seen at http://www.fairfaxcounty.gov/dpwes/stormwater/whatis_swm.htm.

3. Why is stormwater management important to the Potomac River and the Chesapeake Bay?

When it rains or snows, the amount of water that is absorbed back into the environment varies. Rain and snow on natural or undeveloped land gradually infiltrates into the soil, replenishing groundwater supplies and slowly discharging excess runoff to local creeks. Paved roads, sidewalks, buildings, driveways and other impervious surfaces prevent the water from infiltrating. Water that cannot infiltrate into the surrounding environment is stormwater runoff. In order to prevent flooding, stormwater runoff is diverted into storm drains and carried to the nearest stream. Ultimately, this runoff makes its way to the Chesapeake Bay through the Potomac River.

Because impervious surfaces prevent stormwater from infiltrating into the soil, runoff increases in quantity and speed, causing environmentally harmful and potentially dangerous bank erosion in streams. As stormwater runoff flows over pavement and yard areas, it picks up animal waste, oils, sediment, litter and chemicals that are left on streets and walkways. All of these pollutants make their way down through the watersheds to the Potomac River and to the Chesapeake Bay.

Stormwater management facilities are designed to reduce the speed of stormwater runoff and provide time for pollutants to settle in a holding area where they will not be transported downstream. Typical stormwater management facilities used in residential and commercial areas include dry and wet ponds, rain gardens, vegetated swales, trenches, pervious pavement, wetlands and manufactured underground systems designed to store and filter pollutants.

To prevent bank erosion and polluted runoff, engineers and biologists have developed Best Management Practices (BMPs) to accommodate stormwater runoff while minimizing environmental impacts. BMPs include such man-made structures as stormwater management facilities.

4. What is the condition of the county's stormwater system?

Much of the county developed from the 1950s through the 1970s prior to requirements for stormwater controls. There are more than 1,500 miles of county-owned stormwater pipe and approximately 250 miles of these pipes that are more than 40 years old. The monetary value of the entire stormwater pipe system is about one billion dollars. Until the "dedicated penny" was established in fiscal year 2006, there was not a significant or continuous reinvestment effort in the stormwater system. Many of these pipes are reaching the end of their useful service life and some are in failure.

Beginning in the mid-1970s, stormwater management facilities were required to be built as part of newly developed properties. The standards continue to evolve over time, and as older facilities reach the end of their service life, many require significant reinvestment in order to maintain or improve the level of service they were built to provide.

5. How does the process of stormwater management affect water quality?

As the landscape becomes developed, the natural hydrology (the distribution and movement of water) can change drastically. Trees and vegetation that absorb rainwater and infiltrate it into the groundwater are replaced by hard surfaces such as buildings, pavement and concrete that do not allow rainwater to soak into the land. As a result, the amount of stormwater running from a site after development can be substantially larger. The volume and speed of excessive runoff impacts streams and causes erosion and habitat degradation. In addition, when the natural vegetation is replaced by pavement, many pollutants (trash, automobile fluids, fertilizers and spills) are washed into receiving waters and can have very negative impacts upon the aquatic ecosystems. These impacts may continue for miles downstream and to the Chesapeake Bay. Stormwater management seeks to mitigate these impacts by controlling excessive runoff and pollution from developed sites through a variety of structures and techniques. Engineered ponds, wetlands and infiltration structures are some of the techniques that are used. By slowing and detaining stormwater on site and allowing natural vegetation to absorb pollutants, stormwater management can reduce the impacts of development on the downstream receiving waters.

6. Why is water quality important?

Water quality is important for many reasons:

- Municipal drinking water for county resident comes from the Potomac River and the Occoquan Reservoir. Polluted water is more costly to treat in order to make the water potable. Human and animal life cannot continue without water. Polluted surface waters may impact well water from shallow groundwater aquifers. **
- Aquatic ecosystems can be impacted by declines in water quality. The wildlife affected includes edible fishes and shellfishes which may be unhealthy to eat due to elevated contaminants in their tissues.
- The water quality has a direct effect on the quality of life for residents. Aesthetic, commercial and recreational uses are negatively impacted in degraded systems and watersheds.

** An aquifer is a water-bearing rock or a layer of permeable rock, sand or gravel through which ground water flows, containing enough water to supply wells and springs.

For more information about drinking water quality, see http://www.fairfaxwater.org.

7. What is the condition of the streams?

The county has more than 900 miles of streams, and based on physical and biological assessments, 70 to 80 per cent are in fair, poor or very poor condition. Put another way, only 20 to 30 percent of the county's streams are rated in good to excellent condition.

8. How does poor water quality affect wildlife and their habitats?

Poor water quality can negatively impact wildlife and their habitats in a number of ways. The three primary stressors in this area are habitat loss from excessive erosion, excess sedimentation/siltation, and pollutants (nutrients) in the form of nitrogen and phosphorus. Uncontrolled stormwater runoff scours aquatic areas and destroys available habitat for fish and other organisms. Excessive sedimentation buries stream bottom habitats, smothers eggs and the gills of these organisms. Excessive nutrients "over fertilize" waterways resulting in algae blooms that set off a cascading chain of events in ecosystems. The result is oxygen-starved waters, or dead zones, which kill beneficial plants and animals. In addition to these problems, other poor water quality factors cause many organisms to be stressed and unable to survive or reproduce.

9. How does poor water quality affect recreational use of streams and rivers?

Under the Clean Water Act, water bodies must meet basic water quality standards for such uses as swimming, fishing and fish consumption. Excessive pollutants including bacteria in a water body can lead to it being classified as impaired for one or more of these types of uses. Impaired waters may have very little recreational value. Restoring these systems can be a very costly and lengthy process.

10. What can individuals do to improve water quality and preserve wildlife habitats?

Everyone can make a difference in the environment and have a positive impact on water quality and wildlife habitats. There are simple, everyday steps. For more information see the stream health action steps at
http://www.fairfaxcounty.gov/dpwes/publications/stormwater/storm_streamhealth.pdf.

11. What is the effective date, and when will taxpayers begin to pay the service district tax?

The tax became effective July 1, 2009. The amount will be included on the December 2009 real estate tax bill.

12. Is the entire county included in the service district?

The entire county is included in the service district with the exception of Fort Belvoir, which is not subject to county property taxes.

13. Do other Virginia jurisdictions have stormwater service districts?

Arlington County utilizes a service district to fund portions of their stormwater program. Prince William County and the cities of Hampton, Norfolk, Virginia Beach, Portsmouth, Chesapeake, Suffolk and Newport News have established stormwater utility fees to fund all or portions of their stormwater management programs.

14. Why was a service district proposed for stormwater funding?

The service district was proposed by the county executive and approved by the Fairfax County Board of Supervisors to provide a stable, dedicated funding source for the stormwater program, and to meet federal and state stormwater regulatory mandates. More strict federal and state permits require stormwater management to be operated similar to other utilities.

15. Why a service district instead of a stormwater utility?

Many communities across the state have implemented stormwater utility fees and service districts to provide the necessary funds to meet state and federal requirements. However, the establishment and administration of a stormwater utility adds a significant overhead expense, whereas the service district requires no additional administrative resources. Also, property taxes typically are deductible on state and federal income tax returns, whereas utility payments are not.

16. How would a property owner calculate how much this will cost, and how will it show on property tax bills?

At this time, the average assessment for a detached, single family property is $459,228. At this assessment the property owner would pay $45.92 annually. When the assessed value of $459,228 is divided by 100 it equals $4,592. One penny or $0.01 times $4,592 equals $45.92. The annual payment would be $45.92. Half the annual cost as in this example or $22.96, will show on the top right side of the semi-annual real estate tax bill due in July and December. If a property tax bill is sent directly to a mortgage company, it will be paid as part of the real estate tax payment.

17. What is the projected average annual cost per household in Fairfax County?

Based on the average assessment of $459,228, a detached, single family property owner will pay just under $46 per year, or $3.82 per month.

18. What is the average annual cost per household in other Virginia jurisdictions that have dedicated stormwater funding?

It is $63 per year, or $5.25 per month. In many of these communities the utility fee is a supplement to general fund programs.

19. How will this new revenue be used?

The revenue will be used to build, operate and maintain the county's stormwater system, and to meet state and federal regulatory requirements. The county owns and is required to maintain more than 1,500 miles of pipe and paved channels; 42,000 stormwater structures; 1,300 stormwater management facilities; and 18 state regulated dams. The county is also responsible for inspecting about 3,000 private stormwater management facilities.

20. Will this tax pay for dam safety?

Yes. The funds will pay for upgrades to stormwater management dams to meet state regulations, required inspections and maintenance service to ensure the safety of the dams that are owned and operated by Fairfax County.

21. What needs to be done with the stormwater infrastructure?

The infrastructure needs such routine maintenance as removing debris from the system to prevent flooding; repairs to failed and failing stormwater systems; upgrades to dams to meet current regulations; and implementation of water quality improvements to meet federal standards as required in the county MS4 permit.

22. Are there problems with the stormwater infrastructure in Fairfax County?

The county owns and operates more than 1,500 miles of pipe, 1,300 stormwater management facilities and 42,000 stormwater structures. Many of these systems are more than 40 years old and require some degree of rehabilitation. As the system ages, the county will need to reinvest in the stormwater infrastructure to ensure it will continue to function as intended. A failing or failed infrastructure creates safety hazards, flooding and environmental damage. Routine maintenance is more cost effective than allowing the system to fail before fixing it.

23. How has the stormwater management program been funded and what is its annual budget?

The stormwater management program had been funded by the general fund. Current regulatory requirements and the need to reinvest in the county's aging infrastructure require a predictably-funded program. In fiscal year 2006, the county dedicated one penny of the real estate tax towards stormwater management. With this funding, the county was budgeting approximately $30 million, including the penny and the existing general fund programs. Due to budget constraints in fiscal year 2009, many of the stormwater expenses were funded from the penny, in effect reducing total expenditures for the stormwater management program. The proposed district will generate approximately $20 million per year and be dedicated to funding the entire stormwater management program.

24. Are there state and/or federal laws that influence or control stormwater management in Fairfax County?

The Water Quality Act of 1987 requires that municipal separate storm sewer systems (known as "MS4s") must comply with the National Pollutant Discharge Elimination System (NPDES). In addition, new and more stringent Virginia dam safety and stormwater management regulations in 2002 and 2008 have increased significantly the requirements for more frequent inspections, operation and maintenance, and for the development of emergency action plans for state regulated dams. These are federal and state mandates with which the county must comply. The MS4 permit establishes best management practices that the county must employ in operating, inspecting and maintaining the stormwater system.

More information about the county’s MS4 permit can be seen at http://www.fairfaxcounty.gov/dpwes/stormwater/ms4permit.htm.

25. Are these regulations changing?

Yes. As a result of learning more about how urban stormwater contributes to the pollution of the Chesapeake Bay and local streams, there are new federal and state regulations that continue to evolve. The U.S. Environmental Protection Agency (EPA) requires localities to take significant additional steps to reduce the impacts of urban stormwater runoff. This requires increased efforts to inspect existing facilities, improve maintenance, and provide more public education, more monitoring, more reinvestment in existing facilities and construction of new facilities to help reduce the impacts of urban stormwater runoff.

For more information about the Environmental Protection Agency see the web site at http://www.epa.gov.

26. Isn't stormwater already cleaned at the sewage treatment plant?

The stormwater runoff that comes from parking lots, streets, roofs and yards flows directly into streams and ultimately to the Potomac River and the Chesapeake Bay. The stormwater system is maintained and kept separate from the sanitary sewer system. Wastewater is collected and transmitted through a separate pipe system and is delivered to one of the regional sewage treatment plants for treatment.
For more information about the sanitary sewer system see the web site at http://www.fairfaxcounty.gov/dpwes/wastewater/.

For additional information about the stormwater service district, please contact the county's Stormwater Planning Division at 703-324-5500, TTY 711 or by e-mail.

To request this information in an alternate format, call 703-324-5500, TTY 711.

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